wherein said channel semiconductor layer comprises a non-single crystalline silicon semiconductor layer containing oxygen, nitrogen or carbon at a concentration 5 x 10^{19} atoms/cm^3 or less and said semiconductor layer shows a Raman peak at a wavenumber of 512 cm^{-1} or higher.

24. The thin film transistor of claim 23 wherein said channel semiconductor layer is formed on an insulating surface of a substrate.

25. The thin film transistor comprising:

a channel semiconductor layer comprising:

a gate insulating layer contacting said channel layer; and

a gate electrode adjacent to said channel layer with said gate insulating layer therebetween,

wherein said channel semiconductor layer comprises a non-single crystalline silicon semiconductor layer containing oxygen, nitrogen or carbon at a concentration 5 x 10^{19} atoms/cm^3 or less and a ratio of a full band width at half maximum (FWHM) of a Raman peak of said channel semiconductor layer to a FWHM of a Raman peak of a single crystalline silicon is less than 3.

26. The thin film transistor of claim 25 wherein said channel semiconductor layer is formed on an insulating surface of a substrate.

27. A thin film transistor comprising:

a channel semiconductor layer comprising:

a gate insulating layer contacting said channel layer; and

a gate electrode adjacent to said channel layer with said gate